

CURRICULUM VITAE - RYAN H SMITH

Atlantic Oceanographic and Meteorological Laboratory
National Oceanic and Atmospheric Administration
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PERSONAL:

Name: Ryan Hunter Smith
Citizenship: US
Birthplace: Asheville, North Carolina
Job Title: Oceanographer
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INTERESTS:

Regional circulation of south Florida coastal waters.
Circulation patterns and water mass transport into and out of the Caribbean Sea.
Implementation of moored oceanographic sensor arrays.
Development of real-time oceanographic monitoring stations.
Lowered and hull-mounted acoustic Doppler current profiler applications.

PROFESSIONAL EXPERIENCE:

- 7/99 - Present **Oceanographer**
Physical Oceanography Division,
Atlantic Oceanographic and Meteorological Laboratory,
National Oceanic and Atmospheric Administration,
Miami, Florida.
- 11/93 - 7/99 **Research Associate (on contract)**
Physical Oceanography Division,
Atlantic Oceanographic and Meteorological Laboratory,
National Oceanic and Atmospheric Administration,
Miami, Florida.

EDUCATION:

M.S. – Meteorology and Physical Oceanography.
University of Miami, Coral Gables Florida. 2010.
Thesis: *Atlantic-Caribbean Exchange through Windward Passage.*

B.S. – Marine Science and Biology (Chemistry Minor).
University of Miami, Coral Gables Florida. 1994.

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PUBLICATIONS:

Carrillo, L., E. M. Johns, R. H. Smith, J. T. Lamkin, and J. L. Largier (2016). Pathways and upper hydrography in the Mesoamerican Barrier Reef System, Part 2: Thermohaline Structure. Accepted by *Cont. Shelf Res.*. Feb 2016, In press.

Lee, T., N. Melo, N. Smith, E. M. Johns, C. R. Kelble, R. H. Smith, P. B. Ortner (2016). Circulation and water renewal of Florida Bay. Accepted by *Bull. Mar. Sci.* Jan 2016. In press.

Carrillo, L., E. M. Johns, R. H. Smith, J. T. Lamkin, and J. L. Largier (2015). Pathways and upper hydrography in the Mesoamerican Barrier Reef System, Part 1: Circulation. *Cont. Shelf Res.*, 109, 164-176.

Johns, E. M., B. A. Muhling, R. C. Perez, F. E. Muller-Karger, N. Melo, R. H. Smith, J. T. Lamkin, T. L. Gerard, and E. Malca (2014). Amazon River water in the northeastern Caribbean Sea and its effect on larval reef fish assemblages during April 2009. *Fish. Ocean.*, 23(6), 472-494.

Smith, R. H., E. M. Johns, G. J. Goni, J. Trinanes, R. Lumpkin, A. M. Wood, C. R. Kelble, S. R. Cummings, J. T. Lamkin, and S. Privoznik (2014). Oceanographic conditions in the Gulf of Mexico in July 2010, during the Deepwater Horizon oil spill. *Cont. Shelf Res.*, 77, 118-131.

Muhling, B. A., R. H. Smith, L. Vasques-Yeomans, J. T. Lamkin, E. M. Johns, L. Carrillo, E. Sosa-Cordero, and E. Malca (2013). Larval reef fish assemblages and mesoscale oceanographic structure along the Mesoamerican Barrier Reef System. *Fish. Ocean.*, 22(5), 409-428.

Zhao, J., C. Hu, B. Lapointe, N. Melo, E. M. Johns, and R. H. Smith. Satellite observed "black water" events off Southwest Florida: Implications for coral reef health in the Florida Keys National Marine Sanctuary (2013). *Remote Sensing, Special Issue: Remote Sensing for Understanding Coral Reef Dynamics and Processes: Photo-Systems to Coral Reef Systems*, 5, 415-431.

Smith, R. H., and E. M. Johns (2012). Tropical Connections: South Florida's marine environment. Chapter 2, Oceanographic Connectivity, "Oceanographic data are collected in many different ways". Kruczynski W.L., Fletcher P.J., (eds.).

Muhling, B. A., J. T. Lamkin, J. M. Quattro, R. H. Smith, M. A. Roberts, M. A. Roffer, and K. Ramirez (2011). Collection of larval bluefin tuna (*Thunnus thynnus*) outside documented western Atlantic spawning grounds. *Bull. Mar. Sci.*, 87(3), 687-694.

Smith, R. H. (2010) Atlantic-Caribbean Exchange through Windward Passage. Master's Thesis, University of Miami, Coral Gables. 130p.

Lee, T. N., N. Melo, E. Johns, C. Kelble, R. H. Smith, and P. B. Ortner (2008). On Water Renewal and Salinity Variability in the Northeast Subregion of Florida Bay. *Bull. Mar. Sci.*, 82(1), 83-105.

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PUBLICATIONS (CONTINUED):

Kelble, C. R., W. K. Nuttle, E. Johns, T. N. Lee, C. Hittle, R. H. Smith, and P. B. Ortner (2007). Salinity patterns of Florida Bay. *Estuaries* 71, 318-334.

Lee, T. N., E. Johns, N. Melo, R. H. Smith, P. B. Ortner, and D. Smith (2006). On Florida Bay hypersalinity and water exchange. *Bull. Mar. Sci.*, 79(2), 301-327.

MEETING ABSTRACTS:

Smith, R. H., E. M. Johns, J. T. Lamkin, and J. A. Baisre (2015). Oceanographic circulation around Cuba during May 2015 from shipboard, drifter, and satellite measurements. X Congreso de Ciencias del Mar (MarCuba'2015). Havana, Cuba, November 16-20, 2015.

Rasmussen, L. K., J. T. Lamkin, T. L. Gerard, E. Malca, J. A. Baisre, and R. H. Smith (2015). Role of hydrodynamics in structuring spatial distributions of blackfin and skipjack tuna larvae in Cuban waters. X Congreso de Ciencias del Mar (MarCuba'2015). Havana, Cuba, November 16-20, 2015.

Smith, R. H., A. Valle-Levinson, and V. H. Kourafalou (2015). Current observations at Pulley Ridge mesophotic reef: results from a three-year time-series of moored ADCP data. X Congreso de Ciencias del Mar (MarCuba'2015). Havana, Cuba, November 16-20, 2015.

Shulzitski, K., J. T. Lamkin, T. L. Gerard, E. Malca, J. A. Baisre, and R. H. Smith (2015). Patterns of plankton distribution and biomass in Cuban waters. X Congreso de Ciencias del Mar (MarCuba'2015). Havana, Cuba, November 16-20, 2015.

Goni, G. J. and R. H. Smith. Utilizing in situ observations and satellite measurements to examine the extent and variability of the DWH oil spill. Deepwater Horizon Oil Spill Principal Investigator Workshop: Final Report. 2012. National Science and Technology Council, Subcommittee on Ocean Science and Technology. Washington, DC. 84.

Johns, E. M., C. R. Kelble, T. N. Lee, N. Melo, P. B. Ortner, and R. H. Smith (2010). Sea surface temperature, salinity, and chlorophyll variability in the Florida Keys and surrounding coastal waters, 1997 - 2010: Means, seasonal patterns, interannual variability, and extreme events. Proceedings, Linking Science to Management - A Conference and Workshop on the Florida Keys Marine Ecosystem. Duck Key, FL, October 19-22, 2010.

Johns, E. M., M. O. Baringer, F. Bringas, S. R. Cummings, P. N. Di Nezio, C. M. Featherstone, G. J. Goni, L. J. Gramer, G. R. Halliwell, J. C. Hendee, C. R. Kelble, D. Lindo, R. Lumpkin, F. D. Marks, J. R. Molina, R. H. Smith, J. A. Trinanes, and A. M. Wood (2010). Oil spill response activities conducted by NOAA's Atlantic Oceanographic and Meteorological laboratory (AOML) during summer 2010. Proceedings, Linking Science to Management - A Conference and Workshop on the Florida Keys Marine Ecosystem. Duck Key, FL, October 19-22, 2010.

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MEETING ABSTRACTS (CONTINUED):

Halliwell, G. R., V. H. Kourafalou, R. H. Weisberg, W. J. Teague, and R. H. Smith (2008). Impact of Initial Conditions Provided by GODAE Products on the Simulated Coastal Ocean Response to Hurricanes, *EOS Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract OS52B-09

Johns, E. M., T. N. Lee, C. Kelble, R. H. Smith, N. Melo, P. B. Ortner, and V. Kourafalou. Surface Salinity Variability of South Florida Coastal and Estuarine Waters from Gridded Shipboard Observations, 1995 – 2008. Proceedings, 2008 Florida Bay and Adjacent Marine Systems Science Conference, Naples, FL, December 8-11, 2008. University of Florida, 104 2008.

Lee, T. N., N. Melo, N. Smith, E. M. Johns, R. H. Smith, C. Kelble, and P. B. Ortner. On Florida Bay Circulation and Water Exchange with Focus on the Western Subregion. Proceedings, 2008 Florida Bay and Adjacent Marine Systems Science Conference, Naples, FL, December 8-11, 2008. University of Florida, 121 2008.

Melo, N., T. N. Lee, E. M. Johns, R. H. Smith, C. Kelble, and P. B. Ortner. South Florida Coastal Oceanographic Database. Proceedings, 2008 Florida Bay and Adjacent Marine Systems Science Conference, Naples, FL, December 8-11, 2008. University of Florida, 137 2008.

Smith, R. H., T. L. Gerard, E. M. Johns, and J. T. Lamkin (2008), Fisheries Oceanography in the Virgin Islands: Preliminary Results from a Collaborative Research Endeavor, *EOS Trans. AGU*, 89(23), Jt. Assem. Suppl., Abstract OS43A-02.

Johns, E. M., R. H. Smith, J. T. Lamkin, L. C. Birbrieza, L. Vasquez-Yeomans, and E. S. Cordero (2008), Connectivity of the South Florida Coral Reef Ecosystem to Upstream Waters of the Western Caribbean and Gulf of Mexico, *EOS Trans. AGU*, 89(23), Jt. Assem. Suppl., Abstract OS34A-06.

Johns, W. E., R. H. Smith, E. M. Johns, and W. D. Wilson (2008), The Caribbean Mass Budget Revisited, *EOS Trans. AGU*, 89(23), Jt. Assem. Suppl., Abstract OS34A-03.

Johns, E. M., C. R. Kelble, T. N. Lee, N. Melo, R. H. Smith, and P. B. Ortner. Salinity Variability of South Florida Coastal Waters on Time Scales from Episodic to Multidecadal: How Might the Everglades Restoration Change These Patterns? Meeting Abstracts, 2008 Ocean Sciences Conference, Orlando FL March 2-7, 2008. American Society of Limnology and Oceanography, 222.

Melo, N., T. N. Lee, E. M. Johns, R. H. Smith, C. R. Kelble, and P. B. Ortner. Understanding Florida Bay Hypersalinity and Water Exchanges. Meeting Abstracts, 2008 Ocean Sciences Conference, Orlando FL March 2-7, 2008. American Society of Limnology and Oceanography, 299-300.

Smith, R. H., W. E. Johns, and E. M. Johns (2007), Volume transport and variability at Windward Passage, *EOS Trans. AGU*, 88(23), Jt. Assem. Suppl., Abstract OS52A-08.

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MEETING ABSTRACTS (CONTINUED):

Johns., W., E. Johns, R. H. Smith, and J. Molina (2007), Deep overflow of Atlantic waters to the Caribbean Sea through Windward Passage, *EOS Trans. AGU*, 88(23), Jt. Assem. Suppl., Abstract OS52A-03.

Smith, R. H., P. B. Ortner, V. H. Kourafalou, T. N. Lee, E. M. Johns, S. R. Cummings, C. R. Kelble, and C. Hu. (2006), Post-Katrina pollutant and contaminant pathways: downstream transport or local retention?, *EOS Trans. AGU*, 87(36), Ocean Sci. Meet. Suppl., Abstract OS16H-18.

Johns, B., E. M. Johns, and R. H. Smith (2006), Bifurcation of the Atlantic Deep Western Boundary Current through the southern Bahamas, *EOS Trans. AGU*, 87(36), Ocean Sci. Meet. Suppl., Abstract OS54K-04.

Smith, R. H., E. M. Johns, S. R. Cummings, P. B. Ortner, C. R. Kelble, N. Melo, and T. N. Lee. The influence of the 2005 hurricane season on water quality in Florida Bay and surrounding coastal waters. Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference, Duck Key, FL December 11-14, 2005. University of Florida, 146-147 2005.

Johns, E. M., R. H. Smith, P. B. Ortner, T. N. Lee, C. R. Kelble, and N. Melo. Real-time oceanographic and meteorological observations in the Florida Keys National Marine Sanctuary. Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference, Duck Key, FL December 11-14, 2005. University of Florida, 133-134 2005.

Johns, E. M., R. H. Smith, P. B. Ortner, T. N. Lee, C. R. Kelble, and N. Melo. Salinity variability in south Florida coastal waters, 1995-2005. Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference, Duck Key, FL December 11-14, 2005. University of Florida, 135-136 2005.

Lee, T. N., E. M. Johns, N. Melo, R. H. Smith, P. B. Ortner, D. Smith, and N. Smith. On Florida Bay hypersalinity and water exchange. Proceedings, 2005 Florida Bay and Adjacent Marine Systems Science Conference, Duck Key, FL December 11-14, 2005. University of Florida, 123-124 2005.

Bitterman, D., R. H. Smith, W. D. Wilson, N. Melo, and T. N. Lee. Florida Bay shallow water surface drifter. Proceedings, 2003 Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem, Palm Harbor, FL April 13-18, 2003. University of Florida, 56-58 2003.

Johns, E. M., P. Ortner, R. H. Smith, C. Kelble, S. Cummings, J. Hendee, N. Melo, T. N. Lee, and E. Williams, New interdisciplinary oceanographic observations in the coastal waters adjacent to Florida Bay. Proceedings, 2003 Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem, Palm Harbor, FL April 13-18, 2003. University of Florida, 45-47 2003.

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MEETING ABSTRACTS (CONTINUED):

Lee, T. N., E. Williams, E. Johns, R. H. Smith, and N. Melo. Circulation and exchange processes within Florida Bay interior basins. Proceedings, 2003 Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem, Palm Harbor, FL April 13-18, 2003. University of Florida, 26-27 2003.

Melo, N., T. N. Lee, E. Williams, D. Smith, M. Framinan, R. H. Smith, and E. M. Johns. A movie of Florida Bay sea level response to local wind forcing. Proceedings, 2003 Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem, Palm Harbor, FL April 13-18, 2003. University of Florida, 59-60 2003.

Smith, R. H., E. Johns, W. D. Wilson, T. N. Lee, and E. Williams. Moored observations of salinity variability in Florida Bay and south Florida coastal waters on daily to interannual time scales. Proceedings, 2001 Florida Bay and Adjacent Marine Systems Science Conference, Key Largo, FL, April 23-26, 2001. University of Florida, 42-43 2001.

Johns, E., R. H. Smith, W. D. Wilson, T. N. Lee, and E. Williams. Influence of hurricanes, tropical storms, and cold fronts on south Florida coastal waters. Proceedings, 2001 Florida Bay and Adjacent Marine Systems Science Conference, Key Largo, FL, April 23-26, 2001. University of Florida, 14-15 2001.

Johns, E., P. B. Ortner, R. H. Smith, W. D. Wilson, T. N. Lee, and E. Williams. Salinity variability in Florida Bay from monthly high resolution surveys. Proceedings, 2001 Florida Bay and Adjacent Marine Systems Science Conference, Key Largo, FL, April 23-26, 2001. University of Florida, 16-17 2001.

Fratantoni, D. M., P. L. Richardson, W. E. Johns, C. I. Fleurant, R. H. Smith, S. L. Garzoli, W. D. Wilson, and G. J. Goni. The North Brazil Current Rings Experiment. AGU 1999 Spring Meeting, Boston, MA, June 1-4, 1999. Supplement to EOS, Transactions, American Geophysical Union, 80(17):S179, OS31B-10 1999.

Smith, R. H. IASlinks.org: Online management and distribution of oceanographic and meteorological data for the Gulf of Mexico and Caribbean Sea. Proceedings, First Biennial Intra-Americas Sea Initiative (IASI) Science Meeting, Panama City, Panama, November 9-11, 1999. University of Miami 1999.

Wilson, W. D., E. Johns, R. H. Smith, T. N. Lee, and E. Williams. Interaction of freshwater riverine discharges from the Everglades with the Gulf of Mexico and Florida Bay: Preliminary results from a moored array and shipboard surveys. 1999 Florida Bay and Adjacent Marine Systems Science Conference, Programs and Abstracts, Key Largo, FL, November 1-5, 1999. University of Florida Sea Grant Program, 175-177 1999.

Wilson, W. D., S. L. Garzoli, G. J. Goni, W. E. Johns, R. H. Smith, C. I. Fleurant, P. L. Richardson, and D.M. Fratantoni. The North Brazil Current Retroflection: Two recent surveys. AGU 1999 Spring Meeting, Boston, MA, June 1-4, 1999. Supplement to EOS, Transactions, American Geophysical Union, 80(17):S179, OS31B-11 1999.

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MEETING ABSTRACTS (CONTINUED):

Sheinbaum, J., J. Candela, J. Ochoa, A. Badan, I. Gonzalez, W. D. Wilson, and R. H. Smith. Velocity and transport measurements with a lower-acoustic Doppler current profile in the Yucatan Channel: Some preliminary results. Proceedings, Conference on the Transports and Linkages of the Intra-Americas Sea (IAS), Cozumel, Mexico, November 1-5, 1997. IOC/IOCARIBE/MMS, 57 1998.

DATA/TECHNICAL REPORTS:

Fleurant, C. I., W. D. Wilson, W. Johns, S. L. Garzoli, R. H. Smith, D. Fratantoni, P. Richardson, and G. J. Goni. CTD/O2, LADCP, and XBT measurements collected aboard the R/V Seward Johnson, February-March 1999: North Brazil Current Rings Experiment, cruise 2 (NBC-2). NOAA Data Report, OAR-AOML-37, 291 pp. 2000.

Fleurant, C. I., W. D. Wilson, W. E. Johns, S. L. Garzoli, R. H. Smith, D. Fratantoni, P. Richardson, and G. J. Goni. CTD/O2, LADCP, and XBT measurements collected aboard the R/V Seward Johnson, February-March 2000: North Brazil Current Rings Experiment, cruise 3 (NBC-3). NOAA Data Report, OAR-AOML-38, 251 pp. 2000.

Fleurant, C. I., W. D. Wilson, W. E. Johns, S. L. Garzoli, R. H. Smith, D. Fratantoni, P. Richardson, and G. J. Goni. CTD/O2, LADCP, and XBT measurements collected aboard the R/V Seward Johnson, November-December 1998: North Brazil Current Rings Experiment, cruise 1 (NBC-1). NOAA Data Report, OAR-AOML 39, 274 pp. 2000.

Crane, M. L., R. H. Smith, M. H. Bushnell, W. D. Wilson, and S. Tosini. NSWC moored ADCP data, 1994 (Straits of Florida, 26°04.00'N, 80°03.50'W). CD-ROM, NODC-59, National Oceanographic Data Center, Washington, D.C. 1995.